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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,117	11/06/2006	Alenka Vesel	5007653.001US1	2821
29737	7590	06/20/2008		
SMITH MOORE LLP P.O. BOX 21927 GREENSBORO, NC 27420			EXAMINER NATALINI, JEFF WILLIAM	
			ART UNIT	PAPER NUMBER
			2831	
			NOTIFICATION DATE	DELIVERY MODE
			06/20/2008	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/590,117	Applicant(s) VESEL ET AL.	
	Examiner JEFF NATALINI	Art Unit 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/6/06 and 8/18/06</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. The drawings are objected to because figure 1 contains empty boxes, please label box 3 as 'voltage source' and box 8 as 'ammeter' so that one of ordinary skill in the art can look at the drawing and understand what everything represents. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 6-8 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). The claims should state "Device according to 'any of' Claims 3 to 5" to make it clear that these claims are being referred to in the alternative. Claims will be examined as though this is stated.

Claims 1-8 are objected to because of the following informalities:

Throughout the claims 'the' is used to introduce a limitation, for example "the voltage", it would be easier to state "a voltage" and then when referring to that specific voltage use "said voltage" or "the voltage". Also, it seems "the pressure cell" in claims 1-3 and 6-8 is being used interchangeably with "cold cathode pressure gauge", please pick either gauge or cell, and use it throughout each claim.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edelmann et al. (US Pub 20060012373) in view of Scheid et al. (4409482).

In regard to claims 1, 3, and 4, Edelmann et al. discloses:

a method/device for measuring ultrahigh vacuum by means of an ultrahigh-vacuum cold cathode pressure gauge (abstract), characterized in that the voltage on the anode of the pressure cell varies with pressure of the ion current flow (paragraph 15 page 2 and also paragraph 22 page 3), wherein the voltage controlled source is connected to the pressure cell (figure 2, pressure cell MR is connected to source UA) preliminary scans the whole range, and subsequently sets the source to a voltage (paragraph 22 page 3, an alternating voltage would produce a voltage in a range of voltages, and would be maintained a times by the alternating current) preferable the range is between 1kV and 12kV and is scanned in short time (these are not proper limitations 'preferable' means the limitation is not essential and "short time" is relative and any time would broadly read on it).

Edelmann et al. lacks specifically wherein the ion current flow is maintained at its maximum value at all times during the measurement.

Scheid et al. discloses wherein in a vacuum system a maximum current is generated at the ion collector and is maintained constant for a given length of time (col 1 line 18-34).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Edelmann et al. to incorporate keeping the ion flow at its maximum value during the time period for measuring the vacuum pressure as taught by Scheid et al. in order to maintain a correct path of motion of the ions through the measurement for accurate results (col 1 line 20-22).

5. Claims 2, 5, 6/3, 6/4, 6/5, 8/3, 8/4, and 8/5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edelmann et al. (US Pub 20060012373) and Scheid et al. (4409482), as applied to claim 3 and 4 above, and further in view of Peacock (4967157) [note claim 2 is rejected by the three references and not as applied any of the claims above since it is an independent claim] .

In regard to claims 2, 5, 6/3, 6/4, 6/5, 8/3, 8/4, and 8/5, Edelmann et al. discloses:
a method/device for measuring ultrahigh vacuum by means of an ultrahigh-vacuum cold cathode pressure gauge (abstract), characterized in that the voltage on the anode of the pressure cell varies with pressure of the ion current flow (paragraph 15 page 2 and also paragraph 22 page 3), wherein the voltage controlled source is connected to the pressure cell (figure 2, pressure cell MR is connected to source UA) preliminary scans the whole range, and subsequently sets the source to a voltage (paragraph 22 page 3, an alternating voltage would produce a voltage in a range of voltages, and would be maintained a times by the alternating current) preferable the range is between 1kV and 12kV and is scanned in short time (these are not proper limitations 'preferable' means the limitation is not essential and "short time" is relative and any time would broadly read on it).

Edelmann et al. lacks specifically
(claims 2 and 5) wherein the ion current flow is maintained at its maximum value at all times during the measurement and wherein based on a calibration of the gauge will set the value of the source to one stored as optimal (highest current) and

(claims 6/3, 6/4, and 6/5) wherein the pressure cell is a magnetron pressure cell,

(claims 8/3, 8/4, and 8/5) wherein the pressure cell is a Penning pressure cell.

Peacock discloses

[claims 2 and 5] wherein the tube voltage data in a cold cathode discharge vacuum gauge has a calibration voltage and current values with respect to the pressure in the gauge (col 2 line 33-36 and also see col 4 line 54-58) and includes a microprocessor (figure 5 element 28) which can store and show (figure 5, display 32 directly connected to microprocessor 28) the displayed values shown in figures 2 and 3 and [6/3, 6/4, 6/5, 8/3, 8/4, and 8/5] wherein the cell can be a magnetron pressure cell or Penning pressure gauge cell (col 3 line 46-49).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Edelmann et al. to include calibrating the Penning or magnetron pressure gauge/cell used for testing as taught by Peacock in order to have and understand the variance between voltage/current and pressure.

Scheid et al. discloses wherein in a vacuum system a maximum current is generated at the ion collector and is maintained constant for a given length of time (col 1 line 18-34).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Edelmann et al. to incorporate keeping the ion flow at its maximum value during the time period for measuring the vacuum pressure as taught by Scheid et al. in order to maintain a correct path of motion of the ions through the measurement for accurate results (col 1 line 20-22).

6. Claims 7/3 and 7/4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Edelmann et al. (US Pub 20060012373) and Scheid et al. (4409482), as applied to claim 3 and 4 above, and further in view of Kageyama et al. (3872377).

In regard to claims 7/3 and 7/4, Edelmann et al. lacks specifically wherein Edelmann et al. as modified discloses the cell being an inverted magnetron pressure gauge cell.

Kageyama et al. discloses wherein cold cathode ionization gauges are commonly classified as inverted magnetron (col 1 line 11-18).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Edelmann et al. as modified to include an inverted magnetron type as taught by Kageyama et al. because they are easy to manufacture, operate, and durable for maintaining consistency of air or vapor (col 1 line 14-18).

7. Claims 7/5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Edelmann et al. (US Pub 20060012373), Scheid et al. (4409482), and Peacock (4967157), as applied to claim 5 above, and further in view of Kageyama et al. (3872377).

Edelmann et al. lacks specifically wherein Edelmann et al. as modified discloses the cell being an inverted magnetron pressure gauge cell.

Kageyama et al. discloses wherein cold cathode ionization gauges are commonly classified as inverted magnetron (col 1 line 11-18).

It would have been obvious to one with ordinary skill in the art at the time the invention was made for Edelman et al. as modified to include an inverted magnetron type as taught by Kageyama et al. because they are easy to manufacture, operate, and durable for maintaining consistency of air or vapor (col 1 line 14-18).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Sigafus et al. (US Pub 2003/0059730) discloses in a vacuum maintaining a maximum ion current by including a 'peak seeking logic controller' to maintain the value. Liu (7098667, not prior art, but pertinent) discloses a cold cathode ion gauge having calibration.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFF NATALINI whose telephone number is (571)272-2266. The examiner can normally be reached on M-F 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2831

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diego Gutierrez/
Supervisory Patent Examiner, Art Unit 2831

/Jeff Natalini/
Examiner, Art Unit 2831